

Remarks

Reconsideration of this Application is respectfully requested. Applicants submit that consideration and entry of this Amendment after final is proper in that it removes the grounds for rejection or places the claims in better condition for consideration on Appeal.

Upon entry of the foregoing amendment, Claims 46-67 are pending in the application, with Claim 46, 66 and 67 being independent. Claims 1-17 were previously canceled and claims 18-45 were previously withdrawn from consideration. Claim 46 has been amended by this paper. The amendment is believed to introduce no new matter, and its entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections.

Description of the Invention

As previously explained to the Examiner, the present invention relates to a novel aircraft cabin seating unit. The seating unit comprises a fixed housing which houses and shrouds a primary seat, and thus the primary seat occupant, in complete privacy. The primary seat has a reclinable back, a seating portion, a leg rest and a reclining mechanism. The seating portion is arranged to move with the back to allow the back to move between an upright position and a horizontal position. When the back is moved to

the horizontal position, the seating portion cooperates with the back to form a substantially flat surface. The leg rest is arranged to cooperate with the seating portion to form another part of the substantially flat surface when the back is moved to the horizontal position. When the back is moved to the horizontal position to form the substantially flat surface, in cooperation with the seating portion and the leg rest of the primary seat, the fixed housing of the unit advantageously houses and surrounds the primary seat to afford the user privacy while sleeping or resting, without impinging on or physically extending within the space of an adjacent passenger, particularly, a passenger seated rearwardly to the aircraft cabin seating unit of the present invention.

Rejection Under 35 U.S.C. § 102

The Examiner has again rejected Claims 46 and 66 under 35 U.S.C. § 102(b), as being anticipated by U.S. Patent No. 5,402,544 to Crawford *et al.* (the Crawford patent). According to the Examiner the Crawford patent discloses the conventional use of a seat (52) and reclinable back (48) within a fixed housing, and a leg support (54) that can be driven between a retracted position and a supporting position by a trolley (72,107) and electric motor (148). Applicants respectfully disagree with the Examiner's position in view of the following arguments.

Claim 46, as hereby amended, recites an aircraft seating unit comprising a fixed housing which contains a primary seat. The primary seat comprises a reclinable back, a seating portion, a leg rest and driving means. The reclinable back reclines between a substantially upright position and a substantially horizontal position in such a manner

that the back remains substantially *within the housing when moved between the substantially upright position and the substantially horizontal position*. The seating portion is connected to the reclinable back and arranged to move forward with the reclinable back to allow the back to be reclined continuously between a substantially upright position and a substantially horizontal position. The leg rest is connected to the seating portion and arranged to move between a retracted position and an extended position. The reclinable back, seating portion and leg rest are arranged to cooperate to form a substantially flat surface when the back is in the substantially horizontal position and the leg rest is in the extended position.

Applicants again submit that the aircraft cabin seating unit recited in Claim 46, as hereby amended, is not anticipated by the disclosure of the Crawford patent. The cited patent teaches a combined chair and gurney that clearly differs from an aircraft cabin seating unit. As compared structurally to the limitations of Claim 46, the Crawford patent fails to disclose a fixed housing containing a primary seat having a reclinable back arranged to recline between a substantially upright position and a substantially horizontal position, *and that remains within the fixed housing when the back is reclined from the substantially upright position to the substantially horizontal position*. Instead of a fixed housing that houses the back of the gurney in *all positions (either upright, reclined or substantially horizontal)*, the Crawford patent discloses, at most, an outermost support frame (12) having opposed vertical side frames and a plurality of lower cross members which support the other components of the combined chair and gurney, but provides no housing for the chair of the Crawford patent which houses the back of the gurney when

in the horizontal position, as claimed. On the contrary, the back of the gurney of the Crawford patent (as well as its rear support segment, seat and leg support) rest *outside of and on top of the support frame (12) when the components of the gurney are moved to the horizontal position*. As obvious from Figure 10 of the Crawford patent, the reclinable back and rear support segment clearly extend beyond and outside of the bounds of the outermost support frame (the asserted housing) by an appreciable distance when arranged in the horizontal position, unlike Claim 46 as amended.

Applicants further argue that the teachings of the Crawford patent are completely contrary to the stated objectives of the invention, in that the aircraft cabin seating unit of the present invention specifically seeks to provide an aircraft cabin seating unit that (1) affords privacy to the passenger while sitting upright or sleeping, by providing the seating unit with a fixed housing and (2) permits reclining of the primary seat of the unit to a substantially horizontal position without impinging on the area of the passenger seated to the rear. Clearly, the Crawford patent fails to provide such a structure. Not only does the Crawford patent fail to disclose an aircraft cabin seating unit having a primary seat that is maintained within a fixed housing when reclined to a substantially horizontal position, the gurney of the Crawford patent extends *upwardly* from a chair position within the confines of the frame to the gurney position outside of the frame of the device. This upward translation destroys the privacy afforded to the user by taking the passenger outside and on top of the frame to an exposed horizontal position. In addition, when in the horizontal gurney position, the structure of the Crawford patent impedes on and extends within the space of the passenger to the rear. As stated above,

this movement or translation, which results in a loss of privacy and which takes space from the passenger to the rear, is clearly opposite to the present invention. For these reasons alone, Applicants submit that Claim 46 is patentable over the Crawford patent.

Applicants further submit that one of ordinary skill in the art would not consider the disclosure of the Crawford patent analogous to the present invention, as defined by Claim 46, for the purposes of Section 102. The Crawford patent discloses a wheeled chair that converts to a wheeled gurney, a teaching which cannot be relied upon to anticipate the claimed invention. More specifically, seats for an aircraft cabin are required to meet the standards of a variety of regulatory bodies including the Federal Aviation Authority, the Civil Aviation Authority and the Joint Aviation Authority. A listing and brief explanation of such requirements is attached hereto as Exhibits 1 and 2. The two most relevant standards are that (1) the seat must be able to withstand a force of 6-16g (depending on the requirement) while remaining in its floor fittings and not distorting so as to provide protection for a passenger in the event of a crash, for example, and (2) the seat base must withstand an applied downward force of 14g. The latter requirement is particularly significant with respect to the Crawford patent, in that the seat of the Crawford combined chair and gurney is supported by a lifting mechanism. In order for the lifting mechanism of the Crawford patent to be able to support a downward force of 14g, the lifting mechanism would need to be more substantial than that disclosed, making the seat heavy - an undesirable feature in an aircraft seat. In addition, the seats of aircraft cabins, when positioned in the upright position, must meet specific requirements which permit rapid exit from the seats to the main aisle or exits to off-load

the aircraft in emergency situations. In particular, the seat must be at a right-angle to the floor so that no part of it interferes with a passenger's ability to exit past it. As is obvious from the figures, when the device of the Crawford patent is configured as a wheeled chair, the leg support extends beyond the support frame, a position that would interfere with a passenger's ability to egress from the aircraft in an emergency situation. In light of its obvious unsuitability and inability to comply with the requirements for aircraft cabin seating units, Applicants submit that the Crawford patent fails to disclose the invention of Claim 46. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Similar to Claim 46, Claim 66 recites an aircraft cabin seating unit comprising a fixed housing which contains a primary seat. The primary seat comprises, *inter alia*, a reclinable back, a seating portion, a leg rest and a reclining mechanism. Like Claim 46, the reclinable back of the primary seat is arranged to recline in such a manner that it remains within the fixed housing of the aircraft cabin seating unit. Applicants submit that the Crawford patent fails to anticipate the invention of Claim 66 for the same reasons that it fails to anticipate the invention of Claim 46. In view of the lack of an anticipatory teaching, Applicants submit that Claim 66 is also patentable under Section 102. Reconsideration and withdrawal of the rejection with respect to Claim 66 is, therefore, respectfully requested.

Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 46, 66 and 67 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 4,018,166 to Gutridge *et al.* (the Gutridge patent) in view of the Crawford patent. The limitations of Claims 46 and 66 are discussed above. Claim 67 is similar to Claims 46 and 66, but also includes limitations to a back runner, a seating runner and an electric motor drive mechanism for reclining the seat.

The Gutridge patent discloses a seating arrangement for a passenger compartment (10) of a railway carriage. The arrangement comprises opposing seat and berth combinations (23) which can be converted from upright seats to elongated berths by moving the seats of the opposing combinations toward each other. Each seat and berth combination (23) comprises a pair of seats (24) connected to seat backs (25) by a hinged bracket and pin (33,35). Seat back (25) is fitted with rollers (30) received within tracks (26) which guide the seat back from an upright position to a horizontal position. When opposing seat and berth combinations (23) have been positioned in the horizontal position, opposed seats (24) and seat backs (25) form a sleeping surface or berth for the occupant.

The Examiner has taken the position that the Crawford patent discloses use of a conventional leg support and drive means, and that it would have been obvious to one of ordinary skill in the art to modify the seating arrangement of the Gutridge patent with the leg support and drive means of the Crawford patent to provide easier adjustment of the seating arrangement and to increase the sleeping surface provided by the reclined

opposing seat and berth combinations. Applicants submit that Claims 46, 66 and 67 recite patentable subject matter.

Applicants reiterate the statements of its Reply dated May 28, 2003, asserting that the Examiner has used impermissible hindsight reconstruction to combine seating components from outside the field of aircraft seating to reject the claimed aircraft cabin seating units. Moreover, and as argued above, the seats employed in an aircraft cabin are subject to strict requirements enabling them to withstand specific load and impact forces and to permit immediate, unobstructed egress from the cabin in emergencies. *See* Exhibits 1 and 2. Because the combined chair and gurney of the Crawford patent (a wheeled transportation device for use in the medical field) could *never* comply with such requirements, Applicant submit that one of ordinary skill in the art would not be motivated to combined the teachings of the Crawford patent with the Gutridge patent to arrive at the inventions of Claims 46, 66 and 67.

Also, and as discussed in Applicant's previous Reply, the seats of the Gutridge patent are fixed to the walls and floor of the railway carriage. Similar to the Crawford patent, one of ordinary skill in the art of aircraft cabin seating would not consider the teachings of the Gutridge patent, since any attempt to incorporate its structure would conflict with the regulatory standards for aircraft seats. Aircraft manufacturers are required to provide tracks along the cabin floor to which the seats are attached and artisans of aircraft seats would want their seat designs to fit within these tracks. Neither the aircraft manufacturer, nor the aircraft seat designer, would be motivated to consider

any teaching which conflicts with the standards to which both must comply, as the same would give rise to undesirable cost and regulatory considerations. For this reason, Applicants submit that one of ordinary skill in the art would not be motivated to consider either the Crawford patent or the Gutridge patent, much less combine the teachings thereof, to arrive at the inventions of Claims 46, 66 and 67.

In addition, the combination (improper as it is) fails to disclose the claimed limitation of a reclinable back that remains within the fixed housing when translated from a substantially upright position to a substantially horizontal position, as recited in Claims 46, 66 and 67, as argued above. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of Claims 46, 66 and 67 under Section 103.

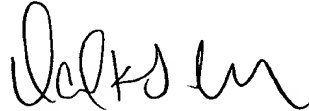
Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read 'D.K.S. Cornwell', written in a cursive style.

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